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DEVERBAL NOMINALS AND TELICITY IN JAPANESE*

Kishimoto (1996) observes that the NP modified by a deverbal nominal with kake is restricted to the object of a transitive verb and the subject of an unaccusative verb, excluding the subject of a transitive verb and an unergative. In this paper we first claim that kake nominalization should recognize the two meanings, the "halfway" reading and the inception reading, for its accurate description. Based on the observation that the "halfway" reading occurs with (transitive) accomplishment verbs while the inception reading is possible with any verb, we further claim that telicity is a key notion to account for the "halfway" reading. Moreover, we argue that the "halfway" interpretation requires that an event extend over an interval so that a halfway point of the event can be measured. Achievement verbs, although telic, denote a punctual event, and therefore the nominal cannot receive the "halfway" reading: it can only have the inception reading. We also demonstrate that telicity can be invoked by contextual information. Our analysis overcomes the problems that Kishimoto's macrorole-based analysis faces and yet subsumes its generalization: the lowest ranking nonagent macrorole argument generally serves as the delimiter of the action denoted by the verb.

1. Introduction

Kishimoto (1996) provides an analysis of one kind of Japanese deverbal nominal modification which consists of the suffix kake ‘be about to, do halfway’ plus a verb stem. The central issue revolves around his observation that the noun that is modified by the deverbal nominal is restricted to a certain set of arguments of the verb to which kake is suffixed. Examples of deverbal nominal modification are given below.

(1) a. Akatyan-ga miruku-o nonda.
   baby-Nom milk-Acc drank
   ‘A baby drank milk.’

b. nomi-kake-no miruku
   drink-KAKE-Gen milk
   ‘milk, half drunk’

c.* nomi-kake-no akatyan
   drink-KAKE-Gen baby
   ‘a baby, almost drinking’

(2) a. Taroo-ga pan-o tabeta.
Taro-Nom bread-Acc ate
'Taro ate bread.'
b. tabe-kake-no pan
eat-KAKE-Gen bread
'bread, half eaten'
c.*tabe-kake-no Taroo
eat-KAKE-Gen Taro
'Taro, almost eating'
(3) a. Kodomo-ga hasitta.
child-Nom ran
'A child ran.'
b.*hasiri-kake-no kodomo
run-KAKE-Gen child
'a child, almost running'
(4) a. Biru-ga kowareta.
building-Nom destroyed
'A building destroyed.'
b. koware-kake-no biru
destroy-KAKE-Gen building
'a building, almost destroyed'

The morpheme kake is suffixed to verbal stems, and the complex consisting of the stem and kake is followed by the genitive marker no, which is necessary for prenominal modification prevalent in Japanese. As the examples show, deverbal nominal modification does not always result in natural phrases. In order to account for the range of patterns demonstrated above, Kishimoto proposes the following semantic rule within Role and Reference Grammar (Kishimoto, 1996, p. 269).

(5) A deverbal nominal may modify only the lowest ranking nonagent macrorole argument on the Actor-Undergoer hierarchy in the LS [= Logical Structure – NT and MI] of the verb.

According to the rule in (5), miruku ‘milk’ in (1b), pan ‘bread’ in (2b), and biru ‘building’ in (4b) are the lowest ranking nonagent macrorole arguments of the verbs, and they can be modified by the deverbal nominal.
The modified nouns in (1c), (2c), and (3b), on the other hand, are the agent macrorole arguments of these verbs, and deverbal nominals cannot modify these nouns.

In this paper we will attempt to provide an alternative analysis based on the aspectual information induced within the context in which deverbal nominals appear. Our aspectual analysis is intended to capture the nature of *kake* modification by considering the relations between meanings that *kake* can induce and aspectual information that individual verbs and context provide.

In our alternative analysis we address the following two points. First, we will demonstrate that *kake* is associated with two meanings. For example, the deverbal nominal in (1b) refers to milk that is drunk halfway or at least is not completely finished. In contrast, the deverbal nominal in (4b) does not bear such a "halfway" interpretation: instead, it refers to a building that is about to collapse. We will call the former the "halfway" interpretation and the latter the inception reading. The recognition of the two meanings of *kake* is crucial in that the source of each interpretation resides in different aspectual criteria, and accordingly not all verbs are associated with both readings.

Second, we claim that telicity is a key notion for capturing the acceptability of the *kake* nominalization. This notion will naturally explain the restrictions seen in (1–3) and furthermore extend beyond Kishimoto's rule in (5). The following constitute a few of the most obvious examples which are not covered by (5).

(6) Kaki-kake-no hito-wa tuzukete-kudasai.
write-KAKE-Gen people-Top continue-please

‘For those who are in the middle of writing, please continue.’

(7) a. Kodomo-ga byooki-ga naotta.
child-Nom illness-Nom recover

‘The child recovered from the illness.’

b. (byooki-ga) naori-kake-no kodomo
(in illness-Nom) recover-KAKE-Gen child

‘a child who is on his way of recovery’

The modified noun *hito* 'people' in (6) corresponds to the agent macrorole argument on the Actor-Undergoer hierarchy in the Logical Structure of the verb *kaku* 'write'. But the agent macrorole argument is the one that is disqualified to be a modified noun according to the rule in (5). The rule clearly makes the wrong prediction here.
The deverbal nominal modification in (7) is based on what has been known as the "major subject" construction. In this construction, the second Nominative marked NP is the subject that is subcategorized for by the verb. In (7a), for example, byooki 'illness' is the sole argument of the verb, and kodomo 'child' is a non-subcategorized member of the clause. What is intriguing in (7b) is that the modified noun is not a subcategorized argument of the verb, let alone the lowest ranking nonagent macrorole argument. The rule in (5) again fails to account for the acceptability of the modification behavior illustrated in (7b).

We will propose an "aspectual" analysis of these examples, showing that it can more adequately account for the range of kake nominalization phenomena and that it can subsume Kishimoto's macrorole-based analysis.

2. Proposal

Our alternative to Kishimoto's (1996) analysis focuses on the aspectual information that is provided by verbs themselves and by the context. As we showed briefly above, there are some restrictions in the availability of deverbal nominal modification with the suffix kake.

In our analysis, we first take into consideration the fact that deverbal nominals with kake bear more than one meaning, which is not touched upon by Kishimoto. Consider the following contrast.

(8) nomi-kake-no miruku 'milk, half drunk'
tabe-kake-no pan 'bread, half eaten'
tukuri-kake-no keeki 'a cake, half made'
kowasi-kake-no biru 'a building, half destroyed'
tokasi-kake-no bataa 'butter, half melted'

(9) sini-kake-no byoonin 'a patient, almost dying'
kie-kake-no hi 'fire, almost extinguished'
kimari-kake-no an 'an idea, almost decided on'
nakusi-kake-no saihu 'a wallet, almost lost'
hazimari-kake-no geki 'a play, almost beginning'

The derived nominals with -kake in (8) describe the state of the modified noun such that the event denoted by the verb is not completed. For instance, nomi-kake-no miruku describes the state of milk that is drunk to some extent but is not finished; similarly, tukuri-kake-no keeki refers to a cake which is being made but is not yet completed. The phrases in (8) thus refer to an object that is characterized by an unfinished event. This is what we refer to as the "halfway" interpretation.
The derived nominals in (9), in contrast, denote that the action named by the verb has not yet started but is about to begin. For example, *sini-kake-no byoonin* refers to a patient who is very ill and is about to die; and *kie-kake-no hi* refers to fire whose flame is getting smaller to the extent that it is about to go out entirely. The phrases in (9), then, refer to the moment at which a given event is about to take place. We shall call this interpretation of *kake* nominals the "inception" reading.

Based on the distinction between the two interpretations of *kake* nominals, we claim that telicity is a key notion to capture the generalization holding for the halfway reading. On the other hand, such is not the case with the inception reading: rather, the recognition of the inception point is relevant to this interpretation. That is, for the halfway reading, the interpretation of telic predicate must extend over an interval, such that it makes sense to consider "half" of it. Hence the phrases in (8), which involve telic accomplishment predicates, receive the halfway reading, while the achievements in (9) are punctual and therefore cannot receive the halfway interpretation. We will further demonstrate the relevance of telicity, showing that telicity can also be invoked by contextual information (for example in (6)).

3. Telicity

Before we present our analysis, we will give a brief illustration of how telicity is induced, as the notion of telicity is central not only to the analysis of the "halfway" interpretation but to the distinction between the two readings. The distinction between telic and atelic events has to do with whether an event has an endpoint; if an event has an endpoint which delimits the action, it is telic; otherwise, it is atelic. In the Vendler-Dowty type of aspect-based classification (Dowty, 1979) accomplishment and achievement verbs are telic while activity and stative verbs are atelic.

Telicity, or delimitedness, is captured in various ways (cf. Dowty, 1979; Tenny, 1994). For example, the presence of a direct object, the type of direct object, and the presence of a goal phrase can each influence telicity. Consider the following.

(10) a. John ate apples for an hour/*in an hour.
    b. John ate an apple *for an hour/in an hour.

(11) a. Mary pushed a cart for an hour/*in an hour.
    b. Mary pushed a cart to the corner *for an hour/in an hour.

As the time adverbial phrases indicate, the telicity of (a) and (b) is not the same: in both pairs of examples, the sentences in (a) are atelic while
those in (b) are telic. The difference in telicity in (10) stems from the number specification of the direct object. (11a) denotes an atelic eventuality, but once a goal phrase is added to it, as in (11b), the event becomes telic. What is shared by the telic sentences in (10b) and (11b) is that the eating and pushing actions are "measured out" in the sense of Tenny (1994), by the presence of an apple and to the corner. That is, the direct object in (10b) and the goal phrase in (11b) play a role as a deliminter of the process denoted by the verb. As we will demonstrate below, the presence of a delimiter, whether it is overtly expressed or induced contextually, is the central factor that leads to the "halfway" interpretation. Thus, with accomplishment verbs, their interpretation extends over an interval, and the action denoted by these verbs is a non-punctual telic event. On the other hand, the interpretation of an achievement verb is instantaneous, and hence the action denoted by achievements is a punctual telic event. These differences contribute to the possible interpretation of the kake nominals of these two types of verbs, which will be discussed below.

4. Analysis

4.1. The "halfway" interpretation

Under the "halfway" interpretation, the availability of deverbal nominal modification has a close correlation to the telicity of verbs as well as the telicity that is contextually induced, rather than being restricted to a specific set of arguments of verbs as Kishimoto argued. More specifically, we will demonstrate below that deverbal nominal modification under this interpretation allows for accomplishment verbs and is generally not possible with stative and activity verbs. We will further examine certain cases with activity verbs, in which some contextual information may contribute to a telic interpretation of an event to yield acceptable deverbal nominal modification.

If a verb denotes a state (i.e., stative verbs) or a dynamic event that does not imply an endpoint of the action (i.e., activity verbs), the verb is not compatible with what kake means. For this reason, the nominalization with kake straightforwardly excludes stative verbs from participating in the modification pattern, as Kishimoto also points out. This prediction is indeed borne out, as the following examples show.

(12) a.*sinzi-kake-no uwasa
    believe-KAKE-Gen rumor

      b.*iri-kake-no kane
         need-KAKE-Gen money
c. *siri-kake-no zizitu
  know-KAKE-Gen fact

The base verbs in (12) denote states, and deverbal nominal modification with them are not acceptable.

The meaning of kake, furthermore, is not compatible with what activity verbs denote. In order to refer to a middle point of an action, there needs to be an endpoint to delimit the action. Such an endpoint will make it possible to measure the entire action, and accordingly a reference to the middle of the delimited action will also be possible. It suggests that activity verbs, which by themselves are normally atelic, would not be able to form deverbal nominals. Consider the following.

(13) a. *hasiri-kake-no hito
    run-KAKE-Gen person
b. *warai-kake-no otoko
    laugh-KAKE-Gen man
c. *tuzuki-kake-no geemu
    continue-KAKE-Gen game
d. *osi-kake-no kuruma
    push-KAKE-Gen car
e. *momi-kake-no kata
    massage-KAKE-Gen shoulder

The events denoted by these verbs do not imply endpoints, nor do the modified nouns serve as delimiters to “measure out” the event. As is predicted, the corresponding deverbal nominals are all ill-formed.

With accomplishment and achievement verbs, which are telic, deverbal nominal modification will form acceptable deverbal nominals. While deverbal nominals with achievement verbs are also acceptable, they induce the inception reading due to the fact that these verbs only imply a punctual telic events, as discussed in Section 4.2. The following are examples of deverbal nominal modification with accomplishment verbs, along with (1), (2), (6), and (8) above.

(14) a. yomi-kake-no hon
    read-KAKE-Gen book
b. tabe-kake-no ringo
    eat-KAKE-Gen apple

In each case the modified noun serves as the delimiter of the action denoted by the verb, and the whole phrase implies a telic action. The comparison between deverbal nominals based on accomplishments on the one hand and those based on statives and activities on the other demonstrates that *kake* nominalization is indeed sensitive to telicity.

The relevance of telicity to the availability of deverbal nominals that we have observed thus far appears to stem from the inherent aspectual properties of verbs. We wish to emphasize, however, that the notion of telicity pertinent to *kake* nominalization should be construed more globally than simply internal to verbs. In order to make our point more explicit, consider the following contrasts.

(15) a. Taroo-ga kono hukuzatuna sigoto-o sita.
    Taro-Nom this complicated work-Acc did
    ‘Taro did this complicated work.’

b. si-kake-no sigoto
do-KAKE-Gen work
    ‘work, halfway done’

(16) a. Taroo-ga sanpo-o sita.
    Taro-Nom walk-Acc did
    ‘Taro took a walk.’

b.*si-kake-no sanpo
do-KAKE-Gen walk
    ‘(leisurely) walk, halfway done’

c. kooen-made si-kake-no sanpo
park-to do-KAKE-Gen walk
    ‘(leisurely) walk to the park, halfway done’

The (a) sentences have the same structure in the relevant sense: both have a Sino-Japanese verbal noun as the direct object of *suru* ‘do’. The difference in acceptability between (15b) and (16b) is straightforwardly accounted for in our analysis. The (a) sentences in these examples differ in telicity: (15a) implies a telic event while (16a) implies an atelic event. The telicity-based analysis, where telicity is globally interpreted, is further supported by the acceptability of (16c): the addition of a goal phrase, *kooen-*. 
made ‘to the park’, delimits the otherwise atelic eventuality. That is, the goal phrase contributes to the telicity of the event by “measuring out” the event.

A similar situation is obtained in the following contrastive pattern.

(17) a. nomi-kake-no miruku
    drink-KAKE-Gen milk
    ‘milk, half drunk’

b.*nomi-kake-no akatyan
    drink-KAKE-Gen baby
    ‘a baby, halfway drinking’

c. miruku-o nomi-kake-no akatyan
    milk-Acc drink-KAKE-Gen baby
    ‘a baby, drinking milk halfway’

(18) a. tabe-kake-no pan
    eat-KAKE-Gen bread
    ‘bread, half eaten’

b.*tabe-kake-no Taroo
    eat-KAKE-Gen Taro
    ‘Taro, eating bread halfway’

c. pan-o tabe-kake-no Taroo
    bread-Acc eat-KAKE-Gen Taro
    ‘Taro, eating bread halfway’

In the (a) phrases, both drinking milk and eating bread are considered as telic eventualities. The problem with the (b) phrases is that the modified nouns, akatyan ‘baby’ and Taroo, cannot “measure out” the drinking and eating events. That is, these modified nouns fail to serve as delimiters, and hence in no way can the phrases be interpreted as telic. The (b) phrases improve in their acceptability once the direct objects of the verbs are added to the phrases in order to make the events explicitly telic, as the phrases in (c) show. Therefore, the question of whether telicity can be induced within the entire phrase in which kake nominalization occurs constitutes a crucial factor for deverbal nominal modification to be natural.

In a similar vein, the following example represents a case in which telicity can be invoked by some contextual information.
The verb *kaku* ‘write’ is an activity transitive verb, and the direct object may contribute to delimiting the event of writing. In (19) the deverbal nominal without the direct object as delimiter would not readily imply a telic event and would be unnatural on a par with (1c) and (2c), for example. What distinguishes between (19) and the (c) sentences of (1)–(2), however, is that a natural telic interpretation is invoked by context in (19). For instance, the particle *wa* is used contrastively to refer to those who have still not finished writing as opposed to those who have completed writing. Such contrast assumes that the event of writing will eventually come to an end. Furthermore, the request, *tuzukete-kudasai* ‘please continue’ implies that the speaker is encouraging continuation of the activity until completion. Thus, a phrase with *kake* nominalization does not necessarily contain all the information that leads to telic interpretation of the event; rather, contextual information may provide some of if. Notice that this kind of phenomenon involving contextual information cannot be explained by an analysis like (5), which is based on lexical information alone.

We have thus far discussed deverbal nominal modification cases where all the modified nouns correspond to the subject or the object of a base verb. A closer examination, however, reveals that modified nouns are by no means restricted to those grammatical functions as long as the globally construed property of telicity is available. First, look at the following examples.

(20) a.* aruki-kake-no Taroo
    walk-KAKE-Gen Taroo
    ‘Taro, halfway walking’

b. kooen-made aruki-kake-no Taroo
    park-to walk-KAKE-Gen Taroo
    ‘Taro, who is halfway walking to the park’

c.* Taroo-ga aruki-kake-no kooen
    Taroo-Nom walk-KAKE-Gen park
    ‘the park, to which Taro is walking halfway’

As we have discussed earlier, telicity, whether it is expressed overtly or obtained contextually, leads to acceptability of deverbal nominal modification. Based on this assumption, (20a) is not acceptable because the described event is atelic in the absence of any source of a delimiter. Contrastive with it is (20b), where the goal phrase plays a role as a
delimiter of the event. Recall that we have already discussed a similar case in (16c). The event of some individual walking to a park is telic. However, compare (20b) with (20c), where a set of identical NPs is involved. We argue that while (20b) explicitly signals telicity by way of the goal phrase, *kooen-made* ‘to the park’, the role of *kooen* ‘park’, especially as a delimiter, is not explicit enough in (20c) without a particular postposition accompanying. For example, *made* ‘to’ in (20b) is a post-position of goal, but other postpositions could cooccur with the same verb, as is illustrated below.

(21) a. *kooen-de aruku*
   park-at walk
   ‘walk at the park’

b. *kooen-kara aruku*
   park-from walk
   ‘walk from the park’

c. *kooen-o aruku*
   park-throughout walk
   ‘walk throughout the park’

Furthermore, depending on the nature of the postposition, the walking event can be either telic or atelic: (21a) and (21b) are atelic while (21c) is telic. Thus, *kooen* ‘park’ in (20c) is too vague as to which postposition is supposed to go with it and as to whether it can play a role as a delimiter of the walking event.

The following examples show that a non-subcategorized argument of the verb can participate in nominal modification with *kake* if the context provides telic information.

(22) a. Taroo-ga aruki-kake-no kooen-made ikeba, Hanako-Taro-Nom walk-KAKE-Gen park-to if go Hanako ni aeru kamosirenai.
   with meet maybe
   ‘If we go to the park to which Taro is walking halfway, we may be able to see Hanako.’

b. Taroo-ga moosukoside soko-made aruki-kake-no
   Taro-Nom almost there-to walk-KAKE-Gen
   kooen
   park
   ‘the park, almost to which Taro is walking (halfway)’
c. ??Taroo-ga aruki-kake-no kooen-de
   Taro-Nom walk-KAKE-Gen park-at
   hanami-o simasyoo.
   cherry blossom viewing-Acc let's do

 'Let's do cherry blossom viewing at the park at which Taro is walking halfway.'

Of interest is (22a): when the phrase in (22a) is put in a context with the
postposition of goal, made 'to', the deverbal nominal is perfectly inter-
pretable and acceptable. Although the postposition made is a goal phrase
that is associated with the verb iku 'go' rather than aruku 'walk', the
presence of made suffixed to kooen forces the interpretation of the NP
(i.e., kooen) bearing the same semantic role within the deverbal nominal
as well. That is, the role that kooen 'park' plays as a goal of the going action
in the conditional clause "doubles" in interpreting the deverbal nominal,
and kooen is construed as a goal of the walking action. To support this
explanation, consider (22c). In this sentence kooen 'park' is accompanied
by the locative postposition de 'at'. The NP kooen within the deverbal nominal
would then be construed as the locative as well: the park AT which Taro is walking halfway. As was mentioned above the locative PP
does not serve as a delimiter of the walking action, and thus telicity is
not induced. The sentence is extremely awkward, if not unacceptable.
(22b) is intended to illustrate the same point. As is the case with (20c),
the semantic role of kooen is ambiguous in the absence of a postposition
with the NP. This example, however, is different from (20c) in that the
deverbal nominal contains an anaphoric expression similar to a resumptive
pronoun in a relative clause. Notice that soko 'there' refers to kooen
'park', and since soko is signaled as a goal by the postposition made, kooen,
with which soko is anaphoric, is construed as a goal as well.

One may wonder whether this sort of "double" interpretation of modified
nouns is a mere accident. This pattern, however, is not an isolated phe-
nomenon observed with deverbal nominal modification: a similar situation
is readily detected in relative clauses in Japanese (cf. Iida, 1992). Examine
the following relative clauses.

(23) a. ??[Taroo-ga aruita] eki
    Taro-Nom walked station

    '(intended) the station to which Taro walked'

    Taro-Nom walked station-to we-too tried going

    'We also tried going to the station to which Taro walked.'
(24) a. ??[Taro-ga hasitta] hito
   Taro-Nom ran person
   ‘(intended) the person with whom Taro ran’

   Taro-Nom ran person-with with party-to came
   ‘Taro came to the party with the person who ran with him.’

The NPs _eki_ ‘station’ and _hito_ ‘person’ in these examples are intended to be a goal and a comitative phrase, respectively. Without the postpositions that would indicate the role of the NPs within the sentences, the relative clauses are not interpretable, as is shown in the (a) phrases. In the (b) sentences, where the role of the NPs within the sentences is signaled by the postpositions, the heads of the relative clauses are interpreted as having the identical roles within the sentences and within the relative clauses. For instance, _made_ ‘to’ signals the accompanying NP as a goal within the whole sentence in (23b), and that is how _eki_ ‘station’ is construed within the relative clause as well. Similarly, the postposition _to_ ‘with’ in (24b) indicates that _hito_ ‘person’ should be interpreted as comitative in the entire sentence, and hence _hito_ receives the comitative reading within the relative clause.4

Finally, modified nouns can be specifiers of NPs as seen in (25). This is described below.

(25) a. Anata-wa Taroo-ga e-o kaki-kake-no
    you-Top Taro-Nom painting-Acc draw-KAKE-Gen
    kodomo-o sitteimasuka.
    child-Acc do you know
    ‘Do you know a child whose painting by Taro is halfway done?’

b. Taroo-ga kodomo-no e-o kaku.
   Taro-Nom child-Gen painting-Acc draw
   ‘Taro draws paintings of children.’

As (25b) shows, the modified noun in (25a), _kodomo_ ‘child’, is the specifier of the direct object of _kaku_ ‘draw’. The event is delimited by the direct object, _e_ ‘painting’ and thus is telic. That is, this is another example that illustrates that as long as telicity is implied, the modified noun is not restricted to members of the verb’s argument structure (or Logical Structure).

To sum up so far, we have argued that (non-punctual) telicity is an important notion that determines the acceptability of deverbal nominals. As we have discussed in detail, telicity can be attributed to aspectual prop-
erties that verbs and verb phrases have, but it can also be invoked by contextual information.\(^5\)

### 4.2. The Inception Interpretation

Unlike the “halfway” interpretation, the “about to” inception reading is possible with any verb, regardless of telicity. In this section, we will first examine *kake* nominalization with achievement verbs and then look at other classes of verbs, to find out what makes the inception reading possible.

We have briefly discussed how achievement verbs receive the inception interpretation, not the halfway interpretation, although they are also telic. Recall the examples in (8)–(9), repeated below as (26)–(27).

\[(26) \quad \text{nomi-kake-no miruku} \quad \text{‘milk, half drunk’} \\
\text{tabe-kake-no pan} \quad \text{‘bread, half eaten’} \\
\text{tukuri-kake-no keeki} \quad \text{‘a cake, half made’} \\
\text{kowasi-kake-no biru} \quad \text{‘a building, half destroyed’} \\
\text{tokasi-kake-no bataa} \quad \text{‘butter, half melted’} \\
\]

\[(27) \quad \text{sini-kake-no byoonin} \quad \text{‘a patient, almost dying’} \\
\text{kie-kake-no hi} \quad \text{‘fire, almost extinguished’} \\
\text{kimari-kake-no an} \quad \text{‘an idea, almost decided on’} \\
\text{nakusi-kake-no saihu} \quad \text{‘a wallet, almost lost’} \\
\text{hazimari-kake-no geki} \quad \text{‘a play, almost beginning’} \\
\]

Accomplishment verbs in the first group imply that the event described has some duration and that *kake* indicates that the event has not reached the endpoint of the action. As we have discussed in Section 4.1 above, telicity over an interval plays a crucial role in determining whether deverbal nominal modification is possible under the halfway interpretation. Achievement verbs in the second group, on the other hand, refer to a brief moment immediately prior to a specific point in time at which each event is supposed to take place. An event described by achievements are thus punctual, and therefore *kake* cannot receive the halfway interpretation. The generalization to be captured here is that if a given verb is an achievement predicate, then *kake* nominalization leads to the inception reading although the reverse does not always hold, as we will show below. Notice that all the verbs involved in the deverbal nominals in (27) are achievements, and the nominals consistently induce the inception reading.

When we focus on the relationship between the modified noun and the verb that forms the deverbal nominal in (27), we may conclude that the modified noun corresponds to a subcategorized argument of the verb. All
the modified nouns except nakusi-kake-no saihu ‘a wallet, almost lost’ in (27) correspond to the subjects of the verbs. As for nakusi-kake-no saihu, the modified noun is the the object of the verb. As was the case with deverbal nominal modification under the “halfway” reading, however, there are ample examples that suggest that the modified noun is not necessarily an argument of the verb around which a deverbal nominal is formed. Such examples include the following.

    injured person-Nom hospital-at died
    ‘The injured person died at the hospital.’

b. keganin-ga nisi-kake-no byooin
    injured person-Nom die-KAKE-Gen hospital
    ‘the hospital at which the injured person is about to die’

    store-Nom 3:00-at closes
    ‘The store closes at 3:00.’

b. Mise-ga simari-kake-no sanzi-ninatte okyaku-ga
    store-Nom close-KAKE-Gen 3:00-turned customer-Nom
    osiyosetekita.
    rushed into
    ‘When it turned 3:00, at which time the store was just about to close, customers rushed into the store.’

The verb sinu ‘die’ in (28) takes only one argument, and it is clear that byooin ‘hospital’ plays a role as a locative adjunct. As (28b) shows, such a locative adjunct can be modified by a deverbal nominal. In this case, the verb is an achievement predicate, and the deverbal nominal is interpreted to mark the inception point. The verb in (29), simaru ‘close’, is another achievement verb and also takes one argument. In (29a) sanzi ‘3:00’ serves as a temporal adjunct. Again, (29b), in which the temporal adjunct is modified by the deverbal nominal, demonstrates that the modified noun need not be an argument of the verb.6

Another example is found in the “major subject” construction, as was briefly mentioned in the Introduction. (30) and (31) illustrate deverbal nominalization based on the major subject construction. One of the characteristics of this construction is that the first ga-marked NP, which is the major subject, is not an argument of the verb while the second one is. So,
kodomo ‘child’ in (30b) and Tanakasensei ‘Prof. Tanaka’ in (31b) are not the arguments of the verbs, and yet they can be modified by deverbal nominals and derive natural phrases. It should be emphasized that none of the examples in (28)–(31) would be adequately explained by Kishimoto’s analysis: none of the modified nouns in these examples correspond to the lowest ranking nonagent macrorole argument.

   child-Nom illness-Nom recover
   ‘The child recovered from the illness.’

   b. byooki-ga naori-kake-no kodomo
      illness-Nom recover-KAKE-Gen child
      ‘a child who is on his way of recovery from the illness’

(31) a. Tanakasensei-ga musuko-ga sinda.
    Prof. Tanaka-Nom son-Nom died
    ‘It is Professor Tanaka whose son died.’

   b. musuko-ga sini-kake-no Tanakasensei
      son-Nom die-KAKE-Gen Prof. Tanaka
      ‘Professor Tanaka, whose son is dying’

Incidentally, there is a systematic exception to deverbal nominalization involving the major subject construction. In the following pairs, the phrases in (a) have the modified nouns that are the major subjects while those in (b) are formed with the verbs’ arguments as the modified nouns. As is indicated, the former is natural while the latter is not.

(32) a. byooki-ga naori-kake-no kodomo
      illness-Nom recover-KAKE-Gen child
      ‘a child on his way of recovery from the illness’

   b.*kodomo-ga naori-kake-no byooki
      child-Nom recover-KAKE-Gen illness

(33) a. musuko-ga sini-kake-no Tanakasensei
      son-Nom die-KAKE-Gen Prof. Tanaka
      ‘Professor Tanaka, whose son is dying’

   b.*Tanakasensei-ga sini-kake-no musuko
      Prof. Tanaka-Nom die-KAKE-Gen son
Given our discussion that adjuncts can be modified by deverbal nominals, as we have observed in (28)–(29), this is somewhat unexpected. Notice, furthermore, the modified nouns in (b) are the sole argument of the achievement verbs, naoru 'recover' and sinu 'die', and we have earlier demonstrated that examples like sini-kake-no byoonin 'a patient, almost dying' (cf. (27)) raise no problem. That is, the comparison between the (b) phrases in (32)–(33), which are based on the major subject construction, and those in (34)–(35) below, which are independent of the major subject construction, strongly suggests that the awkwardness of the former should be attributed to the major subject construction itself.

(34) a. Kaze-ga naotta.
     cold-Nom recover
     'The cold went away.'

   b. Naori-kake-no kaze-ga burikaesita.
     recover-KAKE-Gen cold-Nom returned
     'The cold, almost going away, came back.'

(35) a. Byoonin-ga sinda
     patient-Nom died
     'A patient died.'

   b. sini-kake-no byoonin
     die-KAKE-Gen patient
     'a patient, almost dying'

A piece of evidence that the awkwardness in (32)–(33) has to do with the major subject construction rather than with deverbal nominalization is found in relative clauses. Consider the following examples.

     child-Nom illness-Nom recovered
     'The child recovered from the illness.'

   b. byooki-ga naotta kodomo
     illness-Nom recovered child
     'a child who recovered from the illness'

   c.*kodomo-ga naotta byooki
     child-Nom recovered illness
(37) a. Tanakasensei-ga musuko-ga sinda.
   Prof. Tanaka-Nom son-Nom died
   'Professor Tanaka's son died.'

b. musuko-ga sinda Tanakasensei
   son-Nom died Prof. Tanaka
   'Professor Tanaka, whose son died'

c.*Tanakasensei-ga sinda musuko
   Prof. Tanaka-Nom died son

The (a) sentences show the major subject construction. The head nouns in (b) are major subjects while those in (c) are the sole arguments of the verbs. The pattern of acceptability is exactly the same as the case in deverbal nominal modification we have observed in (30)–(33). Hence, the fact that a major subject can be modified whereas a verb’s argument cannot be is found not only in kake nominalization but in relative clauses, and crucially this generalization holds only when the underlying sentences take the major subject construction. That is, the awkwardness of (32)–(33) should be attributed to the nature of the major subject construction.

We have so far examined achievement verbs with kake, which all induce the inception reading, and argued that modified nouns are not limited to a verb’s subcategorized arguments and that they can be adjuncts as long as the roles of the adjuncts are explicit in relation to the deverbal nominal. Under the inception interpretation, however, telicity is not a crucial factor for deverbal nominal modification to be acceptable, the claim on which we will elaborate below.

Recall that we have demonstrated earlier in section 3.1 that deverbal nominal modification based on activity verbs is unacceptable under the ‘halfway’ interpretation. This phenomenon was shown in (13), which is repeated below as (38).

(38) a.*hasiri-kake-no hito
   run-KAKE-Gen person

b.*warai-kake-no otoko
   laugh-KAKE-Gen man

c.*tuzuki-kake-no geemu
   continue-KAKE-Gen game

It is interesting to note that some activity verbs generate acceptable deverbal nominals under the inception reading. Even those in (38) sometimes become acceptable if the inception of the action denoted by the verb is recognizable, contextually or otherwise. This is shown in (39).
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(39) a. nagare-kake-no mizu
    flow-KAKE-Gen water
    ‘water, just about to flow’

b. nari-kake-no kane
    ring-KAKE-Gen bell
    ‘a bell, just about to ring’

c. hasiri-kake-no kodomo
    run-KAKE-Gen child
    ‘a child, just about to run’

The verbs to which kake is suffixed denote atelic events. The deverbal nominals in these examples are acceptable only under the interpretation in which one can imagine the inception point of each action. For instance, (39c) refers to a situation in which a child is standing at the starting line in a race and describes the very last second of his waiting. The very last moment before each action starts is best described as a split second of a slow-motion picture showing each of these actions. If, however, such an image is not obtainable, the deverbal nominals will be unacceptable. A child just about to engage in an unplanned running action would not fit into this type of special situation. This may also be the reason why (38c) cannot readily be given the meaning in question: an inception point is not recognized in the action denoted by the verb tuzuku ‘continue’. Since the question of whether an inception point is identified determines the acceptability of deverbal nominal modification, the modified noun is not limited to the verb’s arguments. Consider the following.

(40) sensyutati-ga hasiri-kake-no
    athletes-Nom run-KAKE-Gen
    sutaato rain/sutaziamu/sootyoo
    starting line/stadium/early morning
    ‘the starting line/stadium/early morning, at/in which the athletes are just about to run’

The starting line, stadium, and early morning clearly serve as adjuncts of the verb hasiru ‘run’, and these are all acceptable under the inception reading. The race situation depicted in (40) provides an explicit sense that a planned running event marks its inception by a starting gun, for example. Such contextual information distinguishes between (40) and (38a), the latter of which does not readily imply the inception point of the event.7

For the same reason, some cases of stative verbs allow for kake nomi-
nalization under the inception reading as long as the point at which the state denoted by the verb begins is detectable. Consider the following example.

(41) minna-ga sinzi-kake-no uwasa
    everybody-Nom believe-KAKE-Gen rumor

‘the rumor that everybody is just about to believe’

We have earlier observed in (12) above that stative verbs like *sinziru* ‘believe’ cannot appear in *kake* nominalization, but this observation is based on the assumption that nominalization induces the “halfway” meaning. The same derived nominal is acceptable, however, under the inception reading. Thus, while the verb itself refers to a static state, the deverbal nominal in (41) marks the moment at which the state of believing begins. It should be noted, however, that many stative verbs still resist *kake* nominalization even under the inception reading to a larger extent than do other aspectual classes of verbs. For instance, the inception point of needing is readily recognizable, but nominalization with *iru* ‘need’ is not possible. Furthermore, verbs like *aru* ‘be (inanimate)’ and *iru* ‘be (animate)’ seem to disallow *kake* nominalization under any circumstance.

In sum, the inception reading is available when the inception point of the action denoted by the verb is recognizable. For achievement verbs, the inception point is when the denoted action takes place, and this reading is always available. For other classes of verbs such as activity, stative, and accomplishment verbs, the inception reading is possible when the inception point is perceptible in the given context.

5. Conclusion

In this paper we have investigated deverbal nominalization involving the suffix *kake*. We have particularly argued for the following two points. First, *kake* nominalization induces two different meanings, the “halfway” interpretation and the inception reading. Second, different constraints are called for depending on these two meanings. For the “halfway” interpretation to be obtained, a non-punctual telic event must be available. The telicity relevant to *kake* nominalization, however, is to be globally construed in that it can be obtained overtly or contextually. The inception reading, on the other hand, requires that the inception point of an event be recognized. This is normally achieved contextually or conceptually. The following table summarizes our analysis.
Kishimoto also discusses the issue of telicity and claims that the crucial constraints follow from his analysis. The examples relevant to his discussion are as follows (Kishimoto, 1996, p. 278).

(43) a. aruki-kake-no haikingukoosu walk-KAKE-Gen hiking trail
    ‘a hiking trail, halfway walked’

b.*aruki-kake-no kooen
    ‘a park, halfway walked’

He explains that the difference in acceptability is due to the number of macroroles the verb can take. According to him, the verb in (a) is an accomplishment and can take two macroroles while the verb in (b) is an activity and can take only one macrorole. In the latter case, the locative NP kooen ‘park’ cannot receive any macrorole since the verb is an activity and is unable to be modified by a deverbal nominal. As we have discussed above, phrases like (b) can be interpreted as involving a telic event, and it has been shown that the notion of telicity pertinent to kake nominalization may be attributed to various sources that are often beyond lexical specifications. Hence, stating a generalization simply over Logical Structure greatly reduces descriptive adequacy. Our analysis overcomes the problems Kishimoto’s analysis faces and yet subsumes the generalization that (5) is meant to capture: that is, the lowest ranking nonagent macrorole argument, in general, serves as the delimiter of the action denoted by the verb. As we have demonstrated in this paper, in capturing the generalization holding for kake nominalization, telicity should be construed as a more global property of the phenomenon than as something specific to a verb’s Logical Structure.9 The cases in which the lowest ranking nonagent macrorole argument serves as the modified noun, then, are properly accounted for by the telicity-based explanation that we have advanced.

In addition to the advantage stated above, the analysis we have proposed in this paper is descriptively more accurate than Kishimoto’s (1996). First,
the distinction between the two aspectually different meanings is not addressed in Kishimoto’s analysis. Such a distinction is crucial because the conditions under which deverbal nominal modification is available varies depending on the meaning. Second, the rule in (5) has the effect that the agent macrorole argument and adjuncts that are not arguments of a verb are excluded from being modified by deverbal nominals with kake. We have demonstrated ample examples that are counter to such a generalization. Third, the relevance of contextual information, which is not dealt with in Kishimoto’s analysis, turns out to play an important role, as was repeatedly demonstrated throughout this paper.

Finally, we would like to close this section by addressing a remaining question. As a JEAL reviewer pointed out to us, one would wonder whether the analysis advanced in this paper applies to sentences that contain a verbal form of kake. Relevant examples are below.

(44) a. Taroo-ga aruki-kake-ta.
   Taro-Nom walk-KAKE-past
   ‘Taro walked.’

   b. Taroo-ga eki-made aruki-kake-ta.
   Taro-Nom station-to walk-KAKE-past
   ‘Taro walked to the station.’

In these examples, aruki and kake form a compound verb. The (a) sentence denotes an atelic event in the absence of an overt expression or contextual information that “measures out” the event denoted by the verb. The “halfway” interpretation is not available. On the other hand, the inception reading is readily available. Once a telic event is made salient by adding the goal phrase in (b), however, the halfway interpretation becomes accessible. Needless to say, the inception reading is also available in this case. It then appears that our aspectual analysis of kake nominalization is indeed applicable to the verbal form of kake. Confirmation of this conclusion will require a further examination of the data that we dealt with, and we leave it for future investigation.

Notes

* We would like to thank Stuart Davis, Peter Sells, Carol Tenny, and two anonymous JEAL reviewers for their helpful comments and suggestions on earlier versions of this paper.


2 In (7) byooki ‘illness’ corresponds to the lowest nonagent macrorole argument.

3 This term, however, should not necessarily be interpreted as meaning that an event is strictly
halfway finished. This is the term we will use in this paper for convenience and it should refer to an unfinished event, as described in the text.

There are cases in which the role that the head noun plays within a relative clause may be determined by context. The following example illustrates such a situation.

(i) \(\text{Sikinatume-no tame hutari-hitokumi-no reesu-ga moyoosaretara.}\)
\(\text{fund raising-Gen for two a pair-Gen race-Nom was organized}\)
\(\text{[Hanako-ga hasitta] hito-wa daigaku-no sensei datta.}\)
\(\text{Hanako-Nom ran person-Top college-Gen teacher was}\)

'A race by pairs was organized for the purpose of fund raising. The person with whom Hanako ran was a college professor.'

While the comitative interpretation of hito 'person' is not obtained by the rest of the sentence, the previous sentence provides an adequate context that alludes to the reading indicated in the translation above.

Toratani (1998, p. 11) discusses deverbal nominal modification with kake and proposes the following requirement: the verb to which kake is suffixed must be \([+\text{telic}, -\text{punctual}]\) in the kake construction. While her analysis resembles ours in capturing telicity as a key component of this construction, it is limited to the lexical aspectual properties of verbs. As we have extensively discussed above, a comprehensive analysis of kake nominalization requires a more global conceptualization of telicity.

It should be pointed out that the naturalness of (28b) and (29b) is aided by contextual information. For example, *sini-kake-no byooin and *simari-kake-no sanzi by themselves without any context would not be acceptable because in the case of adjunct modified nouns like these, the relationship between the modified noun and the deverbal nominal is not always easy to comprehend. Put in a proper context like (28b) and (29b), however, the relation between the two elements of the phrase becomes clear. This phenomenon is reminiscent of the point we have made earlier in (23)–(24) for relative clauses. It suggests that relative clauses and deverbal nominalization with kake resemble each other significantly.

It is important to note that many cases of deverbal nominal modification under the "halfway" interpretation can also have the inception reading. This is because the conditions under which the two interpretations are licensed are independent of each other. That is, the recognition of the inception point of an action is required for the inception reading, and recognition of such a point can easily be achieved in events such as drinking milk and eating bread in (1)–(2), where the halfway interpretation is also available.

Carol Tenny called our attention to the fact that the English adverb almost displays effects on activities and accomplishments similar to what we claim in Japanese. For example, the interpretation of almost in John almost built a house and John almost ran is not the same. In the former, the equivalents of our "halfway" interpretation and inception reading are available while in the latter, only the inception reading is possible. Detailed discussion is found in Dowty (1979). Also, see Morgan (1969) and McCawley (1973).

As Carol Tenny pointed out to us, the characterization of the "halfway" interpretation on the basis of telicity can be understood from a slightly different perspective: that is, the "halfway" interpretation requires that an expression inducing the notion of "measuring out," whether by way of an overt expression or contextual information, be included in the scope of kake. The inception reading, on the other hand, does not call for such a requirement.

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